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2012

# Taking stock of phenomenology futures

Shaun Gallagher  
*University of Memphis*

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## Publication Details

Gallagher, S. 2012, 'Taking stock of phenomenology futures', *The Southern Journal of Philosophy*, vol. 50, no. 2, pp. 304-318.

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# Taking stock of phenomenology futures

## **Abstract**

I review recent contributions of phenomenology to a variety of disciplines, including the cognitive sciences and psychiatry, and explore (1) controversies about phenomenological methods and naturalization; (2) relations between phenomenology and the enactive and extended mind approaches; and (3) the promise of phenomenology for addressing a number of controversial philosophical issues.

## **Keywords**

taking, stock, phenomenology, futures

## **Disciplines**

Arts and Humanities | Law

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## Taking stock of phenomenology futures

**Abstract:** I review recent contributions of phenomenology to a variety of disciplines, including the cognitive sciences and psychiatry, and explore (1) controversies about phenomenological methods and naturalization; (2) relations between phenomenology and the enactive and extended mind approaches; and (3) the promise of phenomenology for addressing a number of controversial philosophical issues.

**Keywords:** phenomenology, enactivism and extended mind, intersubjectivity

I use the plural, ‘futures’, since it seems clear that phenomenology can go, and is going, in multiple directions. No one of these futures of phenomenology can be the same as phenomenology’s past. Indeed, as in all prediction, these futures remain a matter of unfulfilled intuitions and it would involve some intellectual risk to attempt to forecast how precisely phenomenology as it is practiced today will weather ongoing controversies. I want to argue, however, that phenomenology remains a good investment, and should be an essential component in the portfolios of a number of different disciplines.

One might start to think about the future by looking at past history. To start in this way requires some caution, and it would be easy to get sidetracked in historical considerations. Accordingly, I’ll take only a brief look at how things have developed in recent history, especially with an eye towards future development.

Since the 1960s phenomenology has gone through some very rough times. First, by the early 60s the founders and main figures were either dead or going in different directions and there was little reinvestment being made in phenomenology. Second, to continue the metaphor, there was a general failure at the level of middle managers to produce any innovative products. How many different ways can one re-package what Husserl, Heidegger, Merleau-Ponty, and Sartre have said, and have said better than any of their commentators? Scholarship is essential and important, and there was excellent scholarship during this time; but scholarship alone doesn’t keep the line going. Accordingly, during the 1970-80s, markets constricted and phenomenology came to be considered by some forecasters as close to bankrupt – most clearly by thinkers in the analytic tradition like Dennett (1991) and Metzinger (1995). As if that weren’t enough there were several attempts at hostile takeovers by those who wanted to break up or deconstruct phenomenology, and close down the entire enterprise.

During these times, however, there were a few innovators and entrepreneurs who clearly set out to build on phenomenological basics. Dreyfus (1973), for example, launched a highly profitable critique of artificial intelligence based on phenomenological principles

found in Heidegger and Merleau-Ponty. This work has held up well and still has currency. It continues to influence thinking about embodied cognition and to spark ongoing debates on questions related to action and perception (see e.g., Dreyfus 2007; McDowell 2007; Wheeler 2005).

Another area that saw successful application of phenomenological concepts and that continues to be current, especially in Europe, involves phenomenological psychiatry. This approach opposes standard check-list diagnoses which treat psychiatric “symptoms and signs” from the third-person perspective, as reified, mutually independent and quantifiable entities, *devoid of meaning* in themselves, and open to context-independent definitions and unproblematic objectifications. In contrast, the phenomenological approach, which builds on the work of Jaspers, emphasizes the importance of the patient’s experiences; not isolated *symptom-referents* but details of whole (Gestalt) experiences, feelings, beliefs, expressions, and actions, permeated by the patient’s dispositions and by biographical (and not just biological) detail (Gallagher and Parnas, in press). Actual practice involves second-person interviews guided by phenomenological distinctions. The more detailed conceptual determinations of the Gestalt proceed through the steps of psychiatric typifications (Schwartz and Wiggins 1987). Phenomenology has an important role to play here, and this approach is still under development (see e.g., Sass and Parnas 2007; Parnas and Zahavi 2002). This includes, for example, ongoing debates about the status of agency in schizophrenia (e.g., Gallagher 2000) and the development of recent phenomenological analyses of depression (Ratcliffe 2010).

Thinkers in other fields saw promise in phenomenology as a basis for qualitative research in various applied areas like nursing and education. In regard to qualitative research, however, it has often been the case that practitioners with only a passing knowledge of phenomenology were able to talk about getting to the lived experience of their clients and patients, but in some important sense were unable to deliver. Much of this work depends on interviewing subjects about the particularities of their ongoing experience. If questions are not framed well, however, one frequently gets an opinion or an explanation of why subjects are feeling a certain way rather than a description of their lived experience. Another difficulty appears at the point of interpretation by the investigator. Various methods of organizing the data, or of developing categories that generalize the individual’s reports are brought over from psychology or the social sciences, but are not necessarily phenomenological or well integrated with phenomenology. The result is that the same phenomenological data can be construed in a number of ways and can end up far removed from the lived experience of the subject (see Gallagher and Francesconi [in press] for more on this issue and Petitmengin 2006 for a more viable approach).

As indicated, my intention in this paper is not to dwell on the past. As we all know, past history doesn’t guarantee future performance. But we do see signs here that phenomenology still has currency in a variety of areas. It may be better to look more closely at the present, looking forward, to see what possibilities there are for future development.

## **Fundamentals and the possibility of outsourcing phenomenological tasks**

The transcendental project of phenomenology is certainly alive and well for many thinkers who concern themselves with explicating the basic structures of consciousness. A more hermeneutically informed phenomenology tends to point to the limitations inherent in phenomenological method, and the particularity that one constantly has to deal with. The transcendental project will still have to defend itself from charges that the whole project is one that is culturally situated. Is there such thing as consciousness in general? Or is it rather that since every conscious individual is situated in the world, every conscious experience will be different in some way? Clearly the task is to identify those aspects that transcend such particularities and to bracket empirical concerns that have no place in a transcendental investigation.

Empirical diversity in the lifeworld, however, still might be thought to press against the transcendental project. Consider as an example recent findings about cultural differences in solving mathematical problems. Obviously one can choose different strategies for solving problems, but that's not the case here. Using simple 3<sup>rd</sup>-grade arithmetic problems (e.g.,  $3+4 = ?$ ) Tang et al. (2006) showed that Chinese speakers versus English speakers used entirely different brain areas to solve the problems. "Contrasting to native English speakers, who largely employ a language process that relies on the left perisylvian cortices for mental calculation such as a simple addition task, native Chinese speakers, instead, engage a visuo-premotor association network for the same task" (Tang et al 2006, 10775). This may be accounted for in terms of language differences as well as differences in learning procedures. If such empirical considerations do not count against the transcendental project, they surely complicate it. What's not clear is whether there are phenomenological differences that correlate to these different brain processes, although that would be a reasonable assumption to make. If we do the math and the phenomenology and find out that there are in fact differences at the experiential level – that is, that solving the simple arithmetical problem the Chinese-speaking way versus the English-speaking way actually feels different or has different intentional components, then the transcendentalist has to make a decision: should we add these differences as differences to be accounted for transcendently, or should we subtract them as not counting in the more general aspects of the structural features of consciousness. Given that there are likely many such differences, must the transcendentalist consider each one on its own merits, or refuse to consider any of them as relevant to the project? Perhaps a more interesting question is whether the transcendental problem is like a math problem. Does one's transcendental strategy depend on the language one speaks?

More generally, with respect to phenomenological method, one might ask whether phenomenology can go "high tech" or whether it needs to stick with old-fashioned tools. Consider the method of eidetic variation and the idea that we can intuit, by "running through the multiplicity of variations" (Husserl 1973, 346), for example, that which characterizes all physical objects *as* physical objects, or even all possible objects *as* objects of our experience. This is a large task for any one finite phenomenologist. For Husserl the process of variation starts with the intuition of an exemplar of the

phenomenon to be investigated, taken as one possible variant among an infinite number of others. The imaginative variation may be “due to the aimless favor of association and the whims of the passive imagination” or achieved “by our own pure activity of imaginative invention from our original model” (Husserl 1973, 343). The process will allow things to appear as instances of the same phenomenon until we generate a variation that turns the phenomenon into something else. To see in an essential insight, a *Wesensschau*, the structural invariants is to see the essence of the phenomenon and this happens when we come to establish a horizon within which the object can vary without losing its identity as a thing of that type (Husserl 1970, 104; Zahavi 2003, p. 39).

If we take on Husserl’s (1913) distinction between *formal* and *material ontology*, where formal ontology is the study of the necessary characteristics of objectivities as such (e.g. object, relation, property, etc.), and material ontology investigates structures essential to a particular ontological region (e.g. physical process, living being, mental object, etc.), the latter may require a supplement to the use of imaginative variation, namely *factual* variation. Just as “[r]eal-life deviations can serve the same function as thought experiments” (Zahavi 2005, pp. 141) so they may help us to see variations that may not be so easy to imagine. These may be phenomena that we find manifested in psychopathology, or in the experimental sciences, for example. Looking at real cases may not only serve as a starting point to our imaginative variations, it may help us avoid the presuppositions that phenomenology wants to avoid, since our own imaginative faculties are limited by various biases or lack of knowledge. Husserl, for example, claimed that colors and sounds cannot change into each other (1977, 75). At least he could not imagine how that could be so. But that does not necessarily mean that it is *actually* impossible. Indeed, empirical research on synesthesia demonstrates that the regional (ontological) boundary between colors and sounds can be more malleable than might be ordinarily expected (e.g., Ward 2008). Eidetic variation concerning how the lived body might be experienced can certainly be enhanced by considering such phenomena as Anarchic Hand Syndrome, Somatoparaphrenia, Cotard Delusion, or even the Rubber Hand Illusion.

Employing factual variation may even be more important when we consider more than isolated phenomena and try to grasp the complexity of our whole embodied and situated existence. In such cases, however, even factual variation may not be sufficient. Thus Froese and Gallagher (2010) suggested a technologically enhanced variation method. Specifically computer simulation in the field of artificial life offers a method for investigating possibilities that may lie beyond empirical examples or our finite imaginations. Artificial life investigates the phenomenon of life using, among other techniques, computer simulation, especially in evolutionary robotics and the simulation of artificial agents. This field is concerned with how adaptive behavior emerges out of non-linear interactions of brain, body and world as a systemic whole (Beer 1997). With minimal specifications of an agent, its environment and the desired behavior, the system simulates an evolutionary process that leads to novel and surprising results that often undermine our preconceptions about the necessary conditions for a certain behavior to emerge.

What happens in this research does not depend on the imagination of the investigator since the end result is the product of an evolutionary process that takes the phenomenon far beyond the minimally controlled starting point and frequently in a way that challenges the cherished assumptions and expectations of the investigator. As Zahavi puts it, “Our investigation should be critical and undogmatic, shunning metaphysical and scientific prejudices. It should be guided by what is actually given, rather than by what we expect to find given our theoretical commitments” (2003, p. 44). The use of simulating models avoids the problem of imposing certain pre-established conceptual frameworks and is quite consistent with what phenomenological methods seek to accomplish. The AI systems we can imagine, for example, are always limited by our narrow presuppositions, whether Cartesian in the case of traditional AI (Dreyfus & Dreyfus 1988) or Heideggerian (Wheeler 2005) in the case of the more recent embodied-embedded AI (see Dreyfus (2007)). In addition, in probing philosophical issues that pertain to problem solving or more holistic forms of life, or “life as it could be” (Langton 1989), the use of simulations and evolutionary robotics, rather than imaginative variation alone, facilitates the study of complex systems. Starting with some complex phenomenon and attempting to vary those features which would turn the phenomenon into something else, as specified in the eidetic method, may quickly become unfeasible in practice given the number of things one is required to track – something that may not be possible in a unified intentional act. We can view simulation methods as technological extensions of our imaginative capacity, providing a crucial link between phenomenology and the increasingly complex (non-linear, dynamical, self-organizing) phenomena of the empirical sciences. Froese and Gallagher (2010) suggest “such technology is indeed necessary for the future development of phenomenology, if it is to live up to its own ambitions.” Such methods might be considered a form of ‘out-sourcing’ certain tasks of phenomenology, when such tasks exceed the imaginative capacity of a phenomenological worker to perform them without the aid of technology.

### **Corporate re-organization**

Perhaps one of the most promising areas of research in phenomenology is the continuing work on embodiment and embodied cognition. Indeed, Merleau-Ponty’s phenomenological explication of the role of embodiment continues to inspire ongoing investigations into enactive and extended models of consciousness and cognition. The development of the enactive approach in the work of Varela, Thompson and Rosch (1991), initiated an ongoing, phenomenologically-inspired analysis of perception, action, and intersubjectivity. Enactive phenomenology emphasizes the action-oriented nature of perception, going back to Husserl’s concept of the ‘I can’, and Heidegger’s analysis of the *Zuhanden* and pragmatic understanding of the world. Although there are now several versions of enactivism, some informed by analytic philosophy of mind and emphasizing sensory-motor contingencies (Noë 2004) and non-representationalism (Hutto 2006), even these are consistent with the phenomenological insights of Heidegger and Merleau-Ponty and sometimes explicitly cite these authors.

Ongoing debates about the nature of the body schema as an organization of the lived body are often allied with this enactive approach (e.g., Gallagher 2005) in opposition to



reductionistic tendencies in the cognitive neurosciences (e.g., Berglotti and Aglioti 2010). The strong emphasis on embodiment, indeed ‘radical embodiment’ (Thompson and Varela 2001), also helps to demarcate enactive approaches from more functionalist approaches in cognitive science. This involves another ongoing debate between proponents of enactive approaches and those who advocate for the extended mind hypothesis (e.g., Clark and Chalmers 1998; Clark 2008; Wheeler 2006; Rowlands 2009; 2010). Although there is much that phenomenology can support in the extended mind idea that our cognitive processes involve incorporating parts of the environment (perception assisted by the blind man’s cane; memory distributed across biological system and notebook in hand, etc.), the functionalist tenor of this approach downplays the importance of the body and overlooks the specifically human characteristics of cognition that depend on the specifically human body. For the extended mind advocates the various contributions of the body can be substituted out by either external technologies or internal representational processes (Clark 2008). This tends to reduce the body to a set of substitutable mechanisms, undermining the importance placed on the lived body by phenomenological analysis.

Although the debates between enactive and extended mind theorists are marked by an important set of differences, there have been a few moves to try to develop some common ground. Menary’s (2007; 2009) integrative approach, for example, attempts to maintain the role of the lived body in the characterization of the right kind of coupling between body and environment necessary for cognition. Gallagher and Miyahara (in press) argue that insights from the extended mind approach can be supported by an enactive conception of intentionality (drawing on the notion of operative or motor intentionality in Husserl and Merleau-Ponty), and that this move would provide a better defense of the extended mind hypothesis against those who argue for a narrow internalist definition of mind.

A further area of contemporary research that has benefited greatly from phenomenological resources concerns intersubjectivity. Much in the same way that more general considerations about cognition have been reorganized around the notion of embodiment, recent debates in the area of social cognition, sparked by the development of cognitive neuroscience, have been pushed towards a reconsideration of the body’s involvement in our intersubjective interactions. In contrast to the emphasis on mindreading in the standard “theory of mind” (ToM) approaches in philosophy of mind and psychology, phenomenologists, citing evidence from both developmental studies of young infants and phenomenological and behavioral studies of adults, have emphasized the importance of bodily movements, gestures, facial expressions, eye contact, joint attention and actions in rich and culturally defined contexts that are both pragmatic and social (e.g., Gallagher 2001; 2005; Gallagher and Hutto 2006; Ratcliffe 2007). This approach, which also follows the enactive turn (de Jaegher et al. 2010) has now gained enough traction that the mainstream ToM proponents who emphasize theoretical inference based on folk psychology (“theory theory”) or simulational abilities involving empathy (simulation theory) have started to respond with their own critical perspective about the role of embodiment (e.g., Goldman and Vignemont 2009), phenomenology (e.g., Spaulding 2009), or defenses of mindreading and simulation (e.g., Currie 2008;



Gordon 2008; Herschbach 2008; in press).

In regard to phenomenology, for example, Spaulding suggests that “the fallibility of phenomenology is one reason to doubt [that it can provide guidance on the personal level]. The total irrelevance of phenomenology is another” (2010, 131). Her point is that, on ToM interpretations, what is relevant for an explanation of mindreading is entirely on the subpersonal level. Without some kind of reference to first- or second-person experience, however, it’s not clear what the subpersonal explanations are explaining since intersubjective interactions are not third-person relations that take place between brains or subpersonal representations, but are rather personal level phenomena. Specifically, enactive or phenomenological interaction theory suggests that the real action of social cognition happens in *interaction*, “out there” in the tango of embodied relations, rather than in some internal mechanism in the individual mind or brain. This phenomenological emphasis on embodied interaction shifts the ground, reorganizes the discussion of social cognition, and redefines the problem in non-Cartesian terms.

### **New natural products**

In regard to the various issues discussed in the previous sections, perhaps the main question for phenomenologists pertains to the issue of naturalizing phenomenology. Since the appearance of the 1999 volume *Naturalizing Phenomenology* (Petitot et al. 1999) this has returned as a disputed question (see Zahavi 2004; 2010). In that volume various authors argued in favor of naturalizing phenomenology in the sense of putting phenomenology, as a method, in the service of the natural (cognitive) sciences, either through a process of mathematization (Roy et al. 1999) or through the integrated method of neurophenomenology (Lutz and Thompson 2003; Petitmengin et al. 2007; Thompson, Lutz and Cosmelli 2005; Varela 1996, 1999). The authors in that volume understood that this went against Husserl’s original definition of phenomenology as non-naturalistic, and his argument that phenomenological descriptions cannot be captured in mathematical formulae. In response to the latter, Roy et al. argued that mathematics itself has developed since the time of Husserl, especially in the form of dynamical systems theory, so that some phenomenological detail can be formalized in dynamical models.

More generally, in response to Husserl’s resistance to thinking of phenomenology as contributing to natural science, and to continued insistence by some phenomenologists that to naturalize phenomenology would be to do something other than phenomenology, or that even to speak of a naturalized phenomenology is absurd and a contradiction of “Husserl’s entire conception of phenomenology” (Lawlor 2009, 2) one can cite Husserl himself: “every analysis or theory of transcendental phenomenology—including . . . the theory of the transcendental constitution of an objective world—can be developed in the natural realm, by giving up the transcendental attitude” (1970, p. §57). Specifially, it’s important to keep in mind that Husserl was not anti-science, even if he was anti-scientistic. Indeed, Husserl, not unlike Descartes and Kant before him, wanted to put science on the right footing, and this was one of the purposes of transcendental phenomenology.

Beyond Husserl, others in the phenomenological tradition extended phenomenology to broader application, integrating the natural sciences of consciousness and behavior into their considerations. Gurwitsch, Sartre and Merleau-Ponty, for example, each pursued what could be generally called phenomenological psychology. Gurwitsch appealed to Gestalt psychology, animal studies, and developmental psychology to support the proper phenomenological characterization of various experiences (2009, 246). Sartre, for example, in his phenomenological examination of the imagination played off of empirical psychology, referring, for example, to Flach's experiments on images associated with presented words, and offering a reinterpretation of these experiments to work out distinctions between symbols and images (e.g., 2004, 107ff). Merleau-Ponty is well known for his integration of phenomenology, psychology, and neurology, making extensive use of the experimental literature and case studies in his *Phenomenology of Perception* and in lecture courses at the Sorbonne in 1950-52 (under the title "Human Sciences and Phenomenology") where he discusses a "convergence" of phenomenology and psychology, explicating various misunderstandings on both sides of this relationship (2010, p. 317).

What we see in each of these cases is, to use Merleau-Ponty's term, a convergence, but more than a convergence of results where phenomenology and psychology reach the same conclusions about specific topics. Indeed, in some cases, a critical distance exists between the view defended by phenomenology and the received view of psychological science. Rather, on one reading, the convergence pertains to how phenomenology is put to use in the research fields of psychology and neuroscience. It's a convergence on a methodological plane, which in no way signifies a change in the definition of phenomenology. Nor is it a threat to transcendental phenomenology. The transcendental project remains as its own phenomenological project. What we find in Husserl's concept of a phenomenological psychology, however, and in the work of Gurwitsch, Sartre, and Merleau-Ponty, is a certain pragmatic use made of phenomenological method. Accordingly, these theorists have already provided a positive response to the question of whether phenomenology can be naturalized. On a different reading, the convergence signals both some adjustment in the definition of phenomenology, and a more significant change in the definition of naturalism (see, e.g., Gallagher and Varela 2003; Thompson 2008). What one labels 'natural' is still a controversial question in philosophy of science and is made more so by what phenomenology suggests about what Merleau-Ponty had called "a truth of naturalism" (1963, 201). On either reading, what remains for the future is to deliver on these positive possibilities.

## **Prospectus**

Here is a prospectus, an outlook in very summary form, a modest forecast.

- (1) Phenomenology is not bankrupt, or dead. There are a number of ways in which phenomenology will continue to contribute to contemporary debates in a variety of areas.
- (2) Phenomenology will continue to play an important role, not only in philosophical and critical discussions *about* artificial intelligence and robotics, psychiatry and

psychopathology, and the status of qualitative research, but also *in* these respective applications and practices, contributing to advances in human-robotic interaction (especially with respect to questions about action and interaction among autonomous agents), clinical diagnosis and treatment of psychopathologies, as well as providing a method for qualitative research in a variety of areas.

- (3) Phenomenology will continue to be an important player in the ongoing debates about the nature of mind, agency, subjectivity, and intersubjectivity. Embodied and enactive accounts will continue to borrow heavily from established phenomenological concepts, and will push forward to new phenomenological insights.
- (4) Despite this promise, phenomenology will continue to struggle to define itself and its methods, incorporating new methods, and being incorporated into different methodological settings, especially in the cognitive sciences. Some phenomenologists will continue to argue about the possibility of naturalization; some will advocate for a change in the way we think of nature; others will simply work to make phenomenological methods and insights available to the empirical sciences in both experimental and qualitative research contexts and continue to work towards mutual enlightenment.

This prospectus is not meant to rule out other developing markets for phenomenology. Phenomenology, in a naturalized form, or in its enactive formulation, may find new application in feminist theory, which may require a balancing personal-level analysis in its ongoing encounter with cognitive science (see Bluhm et al. 2012). Phenomenology may offer assistance in a new critical theoretical approach to the analysis of institutional practices taken as instances of extended mind (Gallagher and Crisafi 2010; Gallagher 2011), or in the development of a critical approach to neuroscience (Slaby 2011). Nor does any of this rule out the continued development of phenomenology along the philosophical lines originally drawn by Husserl, Heidegger, Sartre, Merleau-Ponty and other classical phenomenologists (Gallagher and Zahavi 2008).

## References

- Beer, R. D. 1997. The dynamics of adaptive behavior: A research program. *Robotics and Autonomous Systems* 20 (2-4): 257-289
- Berlucchi, G. and Aglioti, S. M. 2010. The body in the brain revisited. *Experimental Brain Research* 200: 25–35
- Bluhm, R., Jacobson, A. J. and Maibom, H. L. 2012. *Neurofeminism: Issues at the Intersection of Feminist Theory and Cognitive Science*. Basingstoke: Palgrave-Macmillan.
- Clark, A. 2008. *Supersizing the Mind: Reflections on Embodiment, Action, and Cognitive Extension*. Oxford: Oxford University Press.
- Clark, A. and Chalmers, D. 1998. The extended mind. *Analysis* 58.1: 7–19

- Currie, G. 2008. Some ways of understanding people. *Philosophical Explorations* 11 (3): 211 – 218.
- De Jaegher, H., Di Paolo, E. and Gallagher, S. 2010. Does social interaction constitute social cognition? *Trends in Cognitive Sciences* 14 (10): 441-447.
- Dennett, D. C. 1991. *Consciousness Explained*. Boston: Little and Brown.
- Dreyfus, H. 1973. *What Computers Can't Do*, New York: Cambridge, MA: MIT Press
- Dreyfus, H. 2007. Why Heideggerian AI failed and how fixing it would require making it more Heideggerian. *Philosophical Psychology* 20 (2): 247-268
- Dreyfus, H. and Dreyfus, S. E. 1988. Making a mind versus modelling the brain: artificial intelligence back at a branch-point. *Daedalus* 117 (1): 15-44
- Froese, T. and Gallagher, S. 2010. Phenomenology and artificial life: Toward a technological supplementation of phenomenological methodology. *Husserl Studies* 26 (2): 83-107.
- Gallagher, S. 2011. The overextended mind. *Versus: Quaderni di studi semiotici* 113-115: 55-66.
- Gallagher, S. 2005. *How the Body Shapes the Mind*. Oxford: Oxford University Press.
- Gallagher, S. 2001. The practice of mind: Theory, simulation or primary interaction? *Journal of Consciousness Studies* 8 (5-7): 83-108.
- Gallagher, S. 2000. Philosophical conceptions of the self: implications for cognitive science. *Trends in Cognitive Sciences* 4 (1): 14-21.
- Gallagher, S. and A. Crisafi. 2009. Mental institutions. *Topoi* 28 (1): 45-51.
- Gallagher, S. and Francesconi, D. (in press). Teaching phenomenology to qualitative researchers, cognitive scientists, and phenomenologists. *Indo-pacific Journal for Phenomenology*.
- Gallagher, S. and Hutto, D. 2008. Understanding others through primary interaction and narrative practice. In: J. Zlatev, T. Racine, C. Sinha and E. Itkonen (eds). *The Shared Mind: Perspectives on Intersubjectivity* (17-38). Amsterdam: John Benjamins.
- Gallagher, S. and Varela, F. 2003. Redrawing the map and resetting the time: Phenomenology and the cognitive sciences. *Canadian Journal of Philosophy*, (Supplementary) 29: 93-132.
- Gallagher, S. and Miyahara, K. (in press). Neo-pragmatism and enactive intentionality. In J. Schulkin (ed.), *Action, Perception and the Brain*. Basingstoke, UK: Palgrave-Macmillan.
- Gallagher, S. and Parnas, J. (in press). Phenomenology and the interpretation of psychopathological experience. In L. Kirmayer, R. Lemelson, and C. Cummings (eds.), *Revisioning Psychiatry Integrating Biological, Clinical and Cultural Perspectives*. Cambridge: Cambridge University Press.
- Gallagher, S. & Varela, F. J. 2003. Redrawing the map and resetting the time: Phenomenology and the cognitive sciences. *Canadian Journal of Philosophy*, Supplementary Volume 29: 93-132
- Gallagher, S. and Zahavi, D. 2008. *The Phenomenological Mind*. London: Routledge.
- Goldman, A. and De Vignemont, F. 2009. Is social cognition embodied? *Trends in Cognitive Sciences* 13 (4): 154-59.

- Gordon, R. 2008. Beyond mindreading. *Philosophical Explorations* 11 (3): 219 – 222
- Gurwitsch, A. 2009. *The Collected Works of Aron Gurwitsch (1901–1973)*. Vol. I *Constitutive Phenomenology in Historical Perspective* Trans. & Ed. J. García-Gómez. Dordrecht: Springer.
- Herschbach, M. 2008: Folk psychological and phenomenological accounts of social perception. *Philosophical Explorations* 11: 223-235.
- Herschbach, M. (in press). On the role of social interaction in social cognition: A mechanistic alternative to enactivism. *Phenomenology and the Cognitive Sciences*.
- Husserl, E. 1973. *Experience and Judgment: Investigations in a Genealogy of Logic*, trans. by: J. S. Churchill & K. Ameriks. London: Routledge & Kegan Paul.
- Husserl, E. 1970. *Cartesian Meditations*. Trans. D. Cairns. The Hague: Martinus Nijhoff.
- Husserl, E. 1913. *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Erstes Buch. Allgemeine Einführung in die reine Phänomenologie*, Husserliana III. Den Haag, Netherlands: Martinus Nijhoff, 1950
- Husserl, E. 1977. *Phenomenological Psychology: Lectures, Summer Semester, 1925*, trans. by: J. Scanlon. The Hague, Netherlands: Martinus Nijhoff.
- Hutto, D. 2008. *Folk Psychological Narratives The Sociocultural Basis of Understanding Reasons*. Cambridge, MA: MIT Press.
- Hutto, D. 2006. Unprincipled engagements: Emotional experience, expression and response. In R. Menary (ed.), *Radical Enactivism* (13-38). Amsterdam: John Benjamins.
- Langton, C. G. 1989. Artificial life. In: C. G. Langton (ed.), *Artificial Life: Proceedings of an Interdisciplinary Workshop on the Synthesis and Simulation of Living Systems*, Santa Fe Institute Studies in the Sciences of Complexity, vol. 4, Redwood City, CA: Addison-Wesley, pp. 1-47.
- Lawlor, L. 2009. Becoming and Auto-Affection (Part II): Who are we? Invited Lecture, ICNAP, 2009. Published at <http://www.icnap.org/meetings.htm> (accessed 15 January 2011)
- Lutz, A. and Thompson, E. 2003. Neurophenomenology: Integrating lived experience into cognitive neuroscience. *Journal of Consciousness Studies* 10: 31-52.
- McDowell, J. 2007. What myth? *Inquiry* 20 (4): 338-51.
- Menary, R. 2009. Intentionality, cognitive integration, and the continuity thesis. *Topoi* 28: 31-43.
- Menary, R. 2007. *Cognitive Integration: Mind and Cognition Unbounded*. Basingstoke: Palgrave Macmillan.
- Merleau-Ponty, M. 2010. *Child Psychology and Pedagogy: The Sorbonne Lectures 1949-1952*, trans. T. Welsh. Evanston: Northwestern University Press.
- Merleau-Ponty 1963. *The Structure of Behavior*, trans. A.L. Fisher. Boston: Beacon Press.
- Merleau-Ponty, M. 1962. *Phenomenology of Perception*, trans. C. Smith. London: Routledge and Kegan Paul.
- Metzinger, T. 1995. Introduction: The problem of consciousness. In T. Metzinger (ed.), *Conscious Experience* (3-37). Exeter: Imprint Academic.



- Noë, A. 2004. *Action in Perception*. Cambridge, MA: MIT Press.
- Parnas, J. and Zahavi, D. 2002. The role of phenomenology in psychiatric diagnosis and classification. *Psychiatric Diagnosis and Classification* (137-62). IEEE Computer Society Press.
- Petitmengin, C. 2006. Describing one's subjective experience in the second person: An interview method for the science of consciousness. *Phenomenology and the Cognitive Sciences* 5: 229–269
- Petitmengin, C., Navarro, V. & Le Van Quyen, M. 2007. Anticipating seizure: Pre-reflective experience at the center of neuro-phenomenology. *Consciousness and Cognition*, 16: 746-764
- Petitot, F.J. Varela, B. Pachoud, and J.-M. Roy (eds.), *Naturalizing Phenomenology: Issues in Contemporary Phenomenology and Cognitive Science*, (330-371). Stanford, CA: Stanford University Press.
- Ratcliffe, M. 2010. Depression, guilt and emotional depth. *Inquiry* 53 (6): 602-626.
- Ratcliffe, M. 2007. *Rethinking Commonsense Psychology: A Critique of Folk Psychology, Theory of Mind and Simulation*. Basingstoke: Palgrave Macmillan.
- Rowlands, M. 2010. *The New Science of the Mind*. Cambridge, MA: MIT Press.
- Rowlands, M. 2009. The extended mind. *Zygon* 44 (3): 628-41
- Roy, J.-M., Petitot, J., Pachoud, B. & Varela, F.J. 1999. Beyond the gap: An introduction to naturalizing phenomenology. In J. Petitot, F. J. Varela, B. Pachoud & J.-M. Roy (Eds.), *Naturalizing Phenomenology: Issues in Contemporary Phenomenology and Cognitive Science* (1-80). Stanford, CA: Stanford University Press.
- Sartre, J-P. 2004. *The Imaginary: A Phenomenological Psychology of the Imagination*. Trans. J. Webber. London: Routledge.
- Sass, L. and Parnas, J. 2007. Explaining schizophrenia: the relevance of phenomenology. In: M.C. Chung, K.W.M. Fulford and G. Graham, Editors, *Reconceiving Schizophrenia* (63-96). Oxford University Press, New York.
- Schwartz, M.A., Wiggins, O.P. 1987. Typifications. The first step for clinical diagnosis in psychiatry. *J Nerv Mental Disorders* **175(2)**:65-77
- Slaby, J. 2010. Steps toward a critical neuroscience. *Phenomenology and the Cognitive Sciences* 9: 397–416
- Spaulding, S. 2010. Embodied cognition and mindreading. *Mind and Language* 25: 119-140
- Tang, Y., Zhang, W., Chen, K., Feng, S., Ji, Y., Shen, J., Reiman, E. M., and Liu, Y. 2006. Arithmetic processing in the brain shaped by cultures. *Proceedings of the National Academy of Science* 103 (28): 10775–10780.
- Thompson, E. 2007. *Mind in Life: Biology, Phenomenology, and the Sciences of Mind*. Cambridge, MA: Harvard University Press.
- Thompson, E., Lutz, A. and Cosmelli, D. 2005. Neurophenomenology: An introduction for neurophilosophers. In A. Brook and K. Akins (eds.), *Cognition and the Brain: The Philosophy and Neuroscience Movement*. New York and Cambridge: Cambridge University Press.

- Thompson, E. and Varela, F. 2001. Radical embodiment: Neural dynamics and consciousness. *Trends in Cognitive Sciences* 5 (10), 418-25
- Varela, F. J. 1996. Neurophenomenology: A methodological remedy for the hard problem. *Journal of Consciousness Studies* 3 (4): 330-49.
- Varela, F.J. 1999. The specious present: A neurophenomenology of time consciousness. In J. Petitot, F.J. Varela, B. Pachoud, and J.-M. Roy, eds., *Naturalizing Phenomenology: Issues in Contemporary Phenomenology and Cognitive Science* (266-314). Stanford, CA: Stanford University Press.
- Varela, F., Thompson, E., and Rosch, E. 1991. *The Embodied Mind*. Cambridge, MA: MIT Press.
- Ward, J. 2008. *The Frog who Croaked Blue: Synesthesia and the Mixing of the Senses*, Hove, UK: Routledge
- Wheeler, M. 2005. *Reconstructing the Cognitive World: The Next Step*, Cambridge, MA: The MIT Press
- Zahavi, D. 2010. Phenomenology and the problem of naturalization. In S. Gallagher and D. Schmicking (eds.), *Handbook of Phenomenology and Cognitive Science*. Dordrecht: Springer.
- Zahavi, D. 2005. *Subjectivity and Selfhood: Investigating the First-Person Perspective*, Cambridge, MA: The MIT Press
- Zahavi, D. 2004. Phenomenology and the project of naturalization. *Phenomenology and the Cognitive Sciences* 3(4), 331–347.
- Zahavi, D. 2003. *Husserl's Phenomenology*, Stanford, CA: Stanford University Press.